

## *SOFC Demonstration & Testing System*



### **RAPID ENTRY INTO THE FIELD OF SOFC SYSTEM DEVELOPMENT**

SOFC fuel cell demonstrators are laboratory systems which not only facilitate rapid entry into the field of SOFC technology, but can also be used to test SOFC systems in combination with a variety of process gases (natural gas, biogas, propane, etc.). Coupling processes such as porous burners or premixed burner and waste energy recovery devices can be integrated into them.

Demonstrators are fitted with a comprehensive sensor network covering both the stack itself and system components, and therefore provide a comprehensive insight into interactions between components during various modes of operation. This is in stark contrast to other field testing prototypes available on the market, which have an extremely limited number of sensors and only offer "black box" functionality.

Depending on the system costs and level of electrical efficiency targeted, gas processing can occur by means of either steam reforming (SR) or auto thermal reforming (ATR). Demonstrator systems are available in various performance classes, which are to be selected on the basis of the stack technology used.

#### **FEATURE:**

- Based on tried-and-trusted stack technology
- Flexible operation with the aid of a reliable controlling modules
- Adaptable to client requirements

#### **TECHNICAL:**

- (1). Performance classes: 0.5~1 kW, 1~3kW, 2~5kW
- (2). Gas Processing: Steam reforming, auto thermal reforming, series stack

- (3). Electrical efficiency (Stack  $DC_{out}$ ): ATR: 20-30%el\_LHV SR: 25-35% el\_LHV
- (4). System efficiency: 30-50%
- (5). Power output: DC (electronic load), AC (inverter) on request
- (6). Stack degradation rate:  $\leq 1\%/1000h$  @750°C, 0.75V, 50% Fuel Utilization
- (7). Operating gases: Natural gas, biogas, methane, propane(others available on request)

**Price:**

Customized according to requirements.

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